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USE OF TEMPOROMANDIBULAR ULTRASOUND IN THE MANAGEMENT OF PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS

Aim:

This study aims to evaluate the potential of using ultrasound examination for the early diagnosis of pathological changes of the temporomandibular joint (TMJ) in patients with juvenile idiopathic arthritis (JIA).

JIA comprises a group of diseases characterised by joint inflammation that appears before the age of 16 years and persists for six consecutive weeks.

JIA can involve several joints including the temporomandibular joint.

Several studies on pathological changes of the TMJ in patients with JIA have been carried out using ultrasound techniques.

Materials and methods:

65 patients with JIA were included: 10 males and 55 females aged between 4 and 23 years with a mean of 12.8 years and a median of 13.1.

The disease course since the diagnosis of JIA is between 18 months and 20 years with a mean of 7.9 and a median of 6.5 years. After an extraoral, intraoral and functional clinical examination of the TMJ, all patients underwent ultrasound examination using a standardised technique, with the patient supine; 2-3 oblique and axial scans were performed for each of the TMJs, taking the articular bone of the head and the mandibular condyle as a reference point.

All patients were examined with the same ultrasound instrument.

The ultrasound scans were performed by a single operator, a doctor with a specialisation in Radiology in the Radiology Unit.

Results and Conclusions:

The results obtained were highly indicative.

11 out of 70 instrumental tests were negative for pathological changes, 21 showed bilateral changes, 31 showed unilateral changes and 7 showed abnormalities not due to condylar structure.

A balance was observed between right and left condylar profile changes of 36(51%) and 37(53%) respectively.

Analysing the data obtained, it can be asserted that ultrasound can be considered an advantageous, non-invasive means of supporting the diagnosis for changes in condylar structure in patients with JIA.

Furthermore, this examination is an easily available test, without biological costs, non-invasive and well accepted by young patients and their families.

Ultrasound is an effective means to support early diagnosis of TMJ disorders and to monitor TMJ changes in young patients with JIA and therefore we could be the first doctors to refer them to the referring specialist.

Fig1: Intercondylar distance between opening and closing

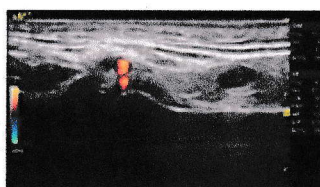
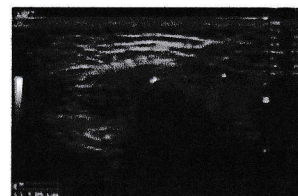


Fig2: Doppler ultrasound to highlight inflammation